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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,726	01/12/2004	Chao-Hsin Lu	LUCH3011/EM	1341
27765	7590	04/05/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			NGUYEN, LONG T	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/754,726

Applicant(s)

LU, CHAO-HSIN

Examiner

Long Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/26/06 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 24-31, 37, 39 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 24, the recitation "a difference of the operational voltage and the control voltage and a difference of the control voltage and ground" causes the claim to be indefinite because there it is inconsistent with what is disclosed in the disclosure. Note that, Figure 4 clearly shows a difference of a voltage operational voltage Vdd and first control voltage V1 and a difference of a second control voltage V2 and ground, i.e., the disclosure does not disclose a difference of the operational voltage and the control voltage and a difference of the control voltage and ground since V1 and V2 are not the same control voltage. Clarification and or appropriate correction is required.

Claims 25-31 are indefinite because they include the indefiniteness of claim 24.

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Also, in claim 25, “the currents of the first and the second transistors are controlled by the difference of the operational voltage and the control voltage; and the currents of the third and the fourth transistors are controlled by the difference of the control voltage and the ground” is indefinite because it is misdescriptive since Figure 4 clearly shows a difference of a voltage operational voltage Vdd and first control voltage V1 and a difference of a second control voltage V2 and ground, i.e., not the same control voltage since V1 and V2 are two difference control voltages. Clarification and or appropriate correction is required.

With respect to claim 37, the recitation “wherein currents of the third and the fourth transistors are controlled by the difference of the control voltage and the ground” is indefinite because it is misdescriptive since Figure 4 clearly shows a difference of a voltage operational voltage Vdd and first control voltage V1 and a difference of a second control voltage V2 and ground, i.e., not the same control voltage since V1 and V2 are two difference control voltages. Clarification and or appropriate correction is required.

With respect to claim 39, “the operational voltage” lacks clear antecedent basis it is not clear if it is the same as the third voltage control signal. Clarification and or appropriate correction is required.

With respect to claim 40, “the ground” lacks clear antecedent basis it is not clear if it is the same as the fourth voltage control signal. Clarification and or appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 24-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Dillon (USP 6,700,403).

With respect to claim 24-27 and 30-37, Figure 2 shows a driving apparatus, which includes: an output circuit (transistors 71 and 72 in both 65 and 66) to output a different signal (PAD1, PAD2), a reference current control circuit (whichever circuit that is used to generated D1, D2) to provide a control voltage (D1, D2), a switch circuit (91, 92 and inverters 73 and 74 for both 65 and 66, also see Col. 4, lines 11-18) coupled to the output circuit and to the reference current control circuit for selectively applying the control voltage (D1, D2), an operational voltage (Vdd) and ground to the output circuit; wherein a magnitude of the differential signal is determined based on at least one of a difference of the operational voltage and the control voltage (Vdd and D1-D2), and a difference of the control voltage and ground (D1-D2 and ground). Note that the output circuit (transistors 71 and 72 in both 65 and 66) comprises a first transistor (PMOS 71 in 65), a second transistor (NMOS 72 in 65), a third transistor (PMOS 71 in 66) and a fourth transistor (NMOS 72 in 66); wherein while the first and fourth transistors are ON then the second and third transistors are OFF and vice versa, and while the output circuit output circuit outputs the different signals, at least one of the first, second, third and fourth transistors operates at a saturation region (inherently because when the transistor is fully ON then it operates at saturation region).

With respect to claims 28 and 29, Figure 2 shows that the output circuit (transistors 71 and 72 in both 65 and 66) comprises a first transistor (71 in 65), a second transistor (72 in 65), a third transistor (71 in 66) and a fourth transistor (72 in 66); and wherein the switch circuit (91, 92 and inverters 73 and 74 for both 65 and 66, also see Col. 4, lines 11-18) comprises a first switch (97 in 91), a second switch (97 in 92), a third switch (98 in 91), a fourth switch (98 in 92), a fifth switch (95 in 91 with inverter 73 in 65), a sixth switch (96 in 91 with inverter 74 in 65), a seventh switch (95 in 92 with inverter 73 in 66), and an eighth switch (96 in 92 with inverter 74 in 66). Note that, in Figure 2 of Dillon, a first control voltage signal (D1), a second voltage control signal (D2), and it is inherent that there must be a switch control circuit to control the switches in Figure 2 of Dillon.

With respect to claims 38-43, Figure 2 of Dillon shows the output circuit (transistors 71 and 72 in both 65 and 66) for outputting a differential signal (PAD1, PAD2) comprising a first transistor (PMOS 71 in 65), a second transistor (NMOS 72 in 65), a third transistor (PMOS 71 in 66) and a fourth transistor (NMOS 72 in 66), a first control signal (D1), a second control signal (D2), a third control signal (Vdd), and a fourth control signal (ground). Note that a magnitude of the differential signal is determined based on at least one of a difference of the third control voltage and the first control voltage (Vdd and D1), and a difference of the second control voltage and the fourth control voltage (D2 and ground). Also, note that, while the output circuit output circuit outputs the different signals, at least one of the first, second, third and fourth transistors operates at a saturation region (inherently because when the transistor is fully ON then it operates at saturation region).

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Response to Arguments

6. Applicant's arguments filed on 1/26/06 have been considered but are moot in view of the new ground(s) of rejection.

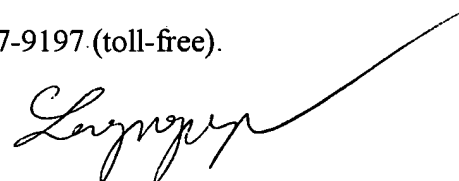
Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Long Nguyen whose telephone number is (571) 272-1753. The Examiner can normally be reached on Monday to Thursday from 8:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (571) 272-1740. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**LONG NGUYEN
PRIMARY EXAMINER**